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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,930	05/08/2006	Li Sun	CN03 0051 US1	9951
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EXAMINER				
HAILU, KIBROM T				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/578,930

Applicant(s)

SUN ET AL.

Examiner

KIBROM T. HAILU

Art Unit

2461

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CIS)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date: _____

DETAILED ACTION

Claim Objections

1. Claims 1, 3-5, 8-9 and 19 are objected to because of the following informalities:

Claim 1, the abbreviation “P2P” used for Peer-to-Peer should be defined in the claim at least where it is first used.

The phrase “on which” in line 5 and the word “transferred” are read as “in which” and “transferred”, respectively.

Claim 3, the word “said” in line 3 is read as “said”.

Claim 4 and 7, the word “information” in lines 8 and 4, respectively, is read as “information”.

Claim 5 the word “with in” in line 13 is read as “within”.

Claim 8, the word “system” in line 7 is read as “system”.

Claim 9, the word “to” in line 12 is read as “to”.

Claim 19, the word “scrambling” in page 33, line 5 is read as “scrambling”. Appropriate correction is required. Please be advised to revise all the words, phrases, limitations and claims before submitting for examination. The Applicants’ have the burden to revise and make correction that the Examiner missed.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-2, 5, 7-8, 11-12 and 16-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claim 1 recites the limitations “the redundant code” in line 4; “the code group usage information” in lines 4-5; “the cell” in line 5. There are insufficient antecedent basis for these limitations in the claim.

The phrase “its adjacent cells”, it is not clear what it is representing for.

Claim 2 recites the limitations “the relative position” in line 12; “said UE and said active UE” in line 17; “the same timeslot” in line 17. There are insufficient antecedent basis for these limitations in the claim.

The phrase “its adjacent cells”, it is not clear what it is representing for.

The phrase “each of other active UEs” is not clear.

Claim 5 recites the limitation “the radio range” in line 11. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitations “the code group usage information” in line 19; “the cell” in line 19; “the adjacent cells” in line 2 (page 29). There are insufficient antecedent basis for these limitations in the claim.

Claim 8 recites the limitations “said network system” in line 7; “the scrambling code” in line 7-8; “the redundant code group” in line 9. There are insufficient antecedent basis for these limitations in the claim.

Claim 16-17, the rejections are the same as claims 7-8.

Claim 11 recites the limitations “the redundant code group” in line 6; “the code group usage information” in line 7; “the cell” in line 7; “the scrambling code” in line 11. There are insufficient antecedent basis for these limitations in the claim.

Claim 12 recites “the relative position” in line 14; “said UE and said active UE” in line 19; “the same timeslot” in page 30, line 19-page 31, line 1. There are insufficient antecedent basis for these limitations in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-6 and 11-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakagawa et al. (US 2006/0215611 A1).

Regarding claim 1, Nakagawa discloses method for mitigating P2P interferences (paragraph [0009]; [0011]), performed by a network system, comprising steps of:(a) determining the redundant code group information, according to the code group usage information of the cell on which two UEs (User Equipments) attempting to establish P2P link camp and its adjacent

cells (paragraph [0104]; [0173]; [0012]; [0087], clearly explain that code groups are identified and/or determined based on the information of the cells that the communication apparatuses trying to communicate with one another);(b) selecting a scrambling code from the redundant code group information and assigning it to the two UEs, so that the two UEs can perform scrambling operation on P2P signals to be transferred between the two UEs by using the scrambling code (paragraph [0124]-[0125]; [0173]; [0153]; [0104], scrambling codes are assigned and identified for each of the cells and signals are exchanged between the communication apparatuses or nodes using the codes).

Regarding claim 2, Nakagawa discloses comprising:(i) measuring the relative position between said two UEs and each of other active UEs in communication state in the cell where said two UEs are camping and its adjacent cells (paragraph [0096]);(ii) if at least one of said two UEs causes radio interference with at least one of said active UEs according to the relative position, further determining whether said UE and said active UE are assigned in the same timeslot (paragraph [0099]-[0100]; [0046]-[0047]; [0051]; [0053]; [0134]; [0018]; [0176]; wherein said step (b) is executed if said UE and said active UE are assigned in the same timeslot (paragraph [0103]-[0104]; [0179]; [0115]).

Regarding claim 3, Nakagawa discloses wherein step (a) includes:(a1) receiving the code group usage information of said camping cell and its adjacent cells transmitted by said two UEs (paragraph [0124]; [0089];); (a2) determining said redundant code group information according to said code group usage information (paragraph [0125]; [0090]).

Regarding claim 4, Nakagawa discloses wherein step (a) includes: determining the redundant code group information according to the code group usage information pre-assigned to said camping cell and its adjacent cells (paragraph [0153]; [0173]; [0104]; [0125]; [0043]).

Regarding claim 5, Nakagawa discloses wherein step (i) includes: detecting whether said two UEs fall within the radio range of each of said active UEs; detecting whether each of said active UEs falls within the radio range of said two UEs (paragraph [0096]; [0099]; [0137]; [0181]).

Regarding claim 6, Nakagawa discloses comprising: (c) reclaiming said scrambling code when P2P communication ends (paragraph [0100]; [0183]).

Regarding claim 11-15, the claims include the features corresponding to the subject matter mentioned above in the rejection to claims 1-5. The claims are mere reformulation of claims 1-5 in order to define the corresponding system. Therefore, the same rejections are applicable hereto.

7. Claim 7 is rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al. (US 2004/0002334 A1).

Lee discloses a method for mitigating P2P interferences, performed by a UE (User Equipment), comprising steps of: (A) acquiring the code group usage information of the cell where the UE is camping through cell search procedure (paragraph [0014], a UE receives information through cell search to eliminate interference); (B) reading the code group usage information of the adjacent cells through adjacent cell search procedure (paragraph [0029]; [0033], illustrate the UE also gets information by measuring or cell searching of the neighboring cells); (C) sending the code group usage information of the cell where the UE is camping and its

adjacent cells to a network system (paragraph [0029]-[0030]; [0033]-[0035], explaining the UE reports the results back to the UTRAN).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 8-10 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Nakagawa.

Regarding claim 8-10, as applied above, Lee discloses receiving, reading or getting the information and reporting to the network.

Lee doesn't explicitly disclose comprising:(D) receiving a scrambling code assigned by said network system, the scrambling code being assigned to the UE by said network system through selecting from the redundant code group information determined by said network system according to said code group usage information; performing scrambling operation on P2P signals to be sent by the UE by using said scrambling code; sending the scrambled signals to another UE

having established P2P link with the UE; receiving the scrambled P2P signals from another UE having established P2P link with the UE, wherein the scrambled P2P signals is scrambled by the another UE by using a scrambling code assigned by said network system; de-scrambling the scrambled P2P signals to obtain information from said another UE by using said scrambling code assigned to the UE.

Nakagawa teaches comprising: (D) receiving a scrambling code assigned by said network system, the scrambling code being assigned to the UE by said network system through selecting from the redundant code group information determined by said network system according to said code group usage information (paragraph [0041]; [0178]; [0172]-[0173]; [0181]; [0115]); (E1) performing scrambling operation on P2P signals to be sent by the UE by using said scrambling code; (F1) sending the scrambled signals to another UE having established P2P link with the UE (paragraph [0099]); receiving the scrambled P2P signals from another UE having established P2P link with the UE, wherein the scrambled P2P signals is scrambled by the another UE by using a scrambling code assigned by said network system; de-scrambling the scrambled P2P signals to obtain information from said another UE by using said scrambling code assigned to the UE (paragraph [0181]; [0090]; [0125]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use receiving scrambling code assigned from the information provided by the system, performing scrambling and/or spreading and despreading and/or descrambling between the transmitting and receiving nodes having established a direct communication (P2P) as taught by Nakagawa into Lee in order to save time and reduce cost accordingly.

Regarding claim 16-19, the claims include the features corresponding to the subject matter mentioned above in the rejection to claims 7-10. The claims are mere reformulation of claims 7-10 in order to define the corresponding apparatus of UE. Therefore, the same rejections are applicable hereto.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIBROM T. HAILU whose telephone number is (571)270-1209. The examiner can normally be reached on Monday-Thursday 8:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D. Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kibrom T Hailu/

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/Jason E Mattis/

Primary Examiner, Art Unit 2461